

1. An oxide superconductor comprising: a textured superconducting material including an array of defects dispersed throughout said superconducting material, said defects comprising a defect compound comprising a first defect element from group A (Cr, Mo, W, Nd) and a second defect element from group B (Pt, Zr, Pd, Ni, Ti, Hf, Ce, Th).

2. An oxide superconductor comprising: a textured superconducting material including an array of defects dispersed throughout said superconducting material, said defects comprising a defect compound comprising the defect element uranium and a second defect element from group C (Zr, Pd, Ni, Ti, Hf, Ce, Th).

3. The oxide superconductor of claim 1, wherein said defects are between 5 nm and 2000 nm in size.

4. The oxide superconductor of claim 2, wherein said defects are between 5 nm and 2000 nm in size.

5. The oxide superconductor of claim 1, wherein said superconducting material comprises a $RE_1Ba_2Cu_3O_{7-\delta}$ compound, wherein RE = Y, Nd, La, Sm, Eu, Gd, Dy, Ho, Er, Tm, Yb, Lu, Tb; the $Bi_2Sr_2CaCu_2O_x$, $(Bi, Pb)_2Sr_2CaCu_2O_x$, $Bi_2Sr_2Ca_2Cu_3O_x$ and $(Bi, Pb)_2Sr_2Ca_2Cu_3O_x$ compounds; the $HgBa_2Ca_2Cu_3O_8$ and $HgBa_2CaCu_2O_6$ compounds, the $TiCaBa_2Cu_2O_x$ or $Tl_2Ca_2Ba_2Cu_3O_x$ compounds and compounds involving substitution such as the $Nd_{1+x}Ba_{2-x}Cu_3O_x$ compounds.

6. The oxide superconductor of claim 2, wherein said superconducting material comprises a $RE_1Ba_2Cu_3O_{7-\delta}$ compound, wherein RE = Y, Nd, La, Sm, Eu, Gd, Dy, Ho, Er, Tm, Yb, Lu, Tb; the $Bi_2Sr_2CaCu_2O_x$, $(Bi, Pb)_2Sr_2CaCu_2O_x$, $Bi_2Sr_2Ca_2Cu_3O_x$ and $(Bi, Pb)_2Sr_2Ca_2Cu_3O_x$ compounds; the $HgBa_2Ca_2Cu_3O_8$ and $HgBa_2CaCu_2O_6$ compounds, the $TiCaBa_2Cu_2O_x$ or $Tl_2Ca_2Ba_2Cu_3O_x$ compounds and compounds involving substitution such as the $Nd_{1+x}Ba_{2-x}Cu_3O_x$ compounds.

7. The oxide superconductor of claim 5, wherein said defects are between 10 nm and 1000 nm in size.

8. The oxide superconductor of claim 6, wherein said defects are between 10 nm and 1000 nm in size.

9. A superconducting trapped-field magnet comprising the oxide superconductor of claim 1 capable of maintaining a persistent circulating current within said oxide superconductor.

10. A superconducting trapped-field magnet comprising the oxide superconductor of claim 2 capable of maintaining a persistent circulating current within said oxide superconductor.

11. The trapped-field magnet of claim 9 wherein the current density of said circulating current is in the range 100 to 300,000 amps per square centimeter.

12. The trapped-field magnet of claim 10 wherein the current density of said circulating current is in the range 100 to 300,000 amps per square centimeter.

13. A magnetic shield comprising the oxide superconductor of claim 1 capable of maintaining in a superconducting state a persistent circulating current within said oxide superconductor.

14. A magnetic shield comprising the oxide superconductor of claim 2 capable of maintaining in a superconducting state a persistent circulating current within said oxide superconductor.